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ABSTRACT

This study investigated the effects of a study skills course combined with or without class-specific tutoring, and whether or not faculty would be able to observe differences in behavior of high risk students as a result of student participation in the two different levels of intervention. Students (n=22) in the College Skills Development Program (CSDP), a comprehensive developmental studies program that consists of a study skills course with required attendance at tutoring sessions, were compared to students (n=30) who voluntarily enrolled in a study skills course and to a control group (n=21). Students were compared with regard to grade point average (GPA) and faculty perceptions of academic behaviors. Achievement was found to be greater for the students in the comprehensive program and the faculty reported a greater number of positive behaviors on the part of these students in their classes. A significant correlation between GPA and the instrument used to elicit faculty perceptions indicated the validity of this type of assessment in measuring successful academic behaviors. A one-way analysis of variance indicated that the three groups of students differed in terms of predicted GPA and how their actual performances compared to their predicted achievement. The CSDP group that combined study skills course with academic tutoring had the best academic achievement. The faculty questionnaire is appended. (Author/JLS)

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Effects of Study Skills Programs on the Academic Behaviors of College Students

Paper Presented at the 20<sup>th</sup> Annual Conference of the  
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### Abstract

Students in a comprehensive developmental studies program (study skills course and required attendance at tutoring sessions) were compared to students enrolled in a study skills course and to a control group with regard to grade point average and faculty perceptions of academic behaviors. Achievement was greater for the students in the comprehensive program and the instructors reported a greater number of positive behaviors on the part of these students in their classes. A significant correlation between grade point average and the instrument used to elicit faculty perceptions indicated the validity of this type of assessment in measuring successful academic behaviors.

## Effects of Study Skills Programs on the Academic Behaviors of College Students

The goals of this investigation were to determine the effects of a study skills course combined with or without class-specific tutoring, and whether or not faculty would be able to observe differences in student behavior as a result of the students' participation in the two different approaches intended to influence the academic behaviors of at-risk college freshmen.

### Theoretical Perspective

Students may be labeled by colleges as "at-risk" or "underprepared" on the basis of high school grade point average, SAT scores, the lack of particular courses, or placement tests. These measures reflect a combination of cognitive and affective variables. Students in this at-risk population may have the ability to succeed but they often lack the motivation to achieve or have not acquired the skills that result in greater academic success. An appropriate goal of an introductory study skills course may be to change the habits, attitudes, and behaviors of these students rather than improve cognitive skills. The at-risk student may be more successful in college than in high school if academic behaviors which contribute to college achievement are acquired, whatever the reason for poor performance in the past. Previous studies (Grigsby and Bender, 1993; Stallworth-Clark, Scott, and Nist, 1996) have shown the effectiveness of programs in terms of academic progress as demonstrated by retention, grade point average, and scores on reading tests, but there is also some question as to the effectiveness of general study skills courses versus assistance related to specific course content. Some studies (Gebelt, Parilis, Kramer and Wilson, 1996) have questioned the amount of transfer between what is taught in a study skills course and the performance in academic classes. This perspective would argue for approaches that maximize the transfer of skills to course content.

Traditional measures of the effectiveness of intervention programs include test scores, grade point averages, and retention data. When examining attitudinal and behavioral changes, students' self-assessment might be examined. However, it was thought that instructors' observations of appropriate

behaviors exhibited by the program participants as well as by students in a control group would provide another type of feedback in terms of demonstrating whether the developmental skills courses had an influence on students in their academic classes. This researcher wanted to determine whether faculty could *observe* differences in behavior aside from the performance on tests, papers, and other class requirements. The observations of the instructors provide a different perspective than merely relying on student self-assessment instruments which may be helpful when the goal is self-awareness but results may not accurately reflect actual behavioral changes versus self-perceptions.

#### Method

The College Skills Development Program was started at the Penn State Berks Campus in 1991 with the goals of improving the academic success and retention of students whose predicted grade point average (based on high school grades and SAT scores) was less than a 2.00. These students are routinely denied admission as degree candidates at Penn State but may attend the university as "provisional" students. As a condition of their admission to the Berks Campus location of Penn State, these students agreed to participate in the College Skills Development Program (CSDP). The program consists of a restricted course schedule, a required study skills course, and mandatory attendance at tutoring sessions. The class schedule for participants comprised a math course (level based upon a placement test), a writing class (either a review of basic writing skills or rhetoric and composition), either an introductory sociology or psychology course, physical education, and a study skills class. The CSDP participants were enrolled in the same courses as other students with the exception of the study skills class. The mandatory tutoring occurred once a week for each of the major courses--math, the social science course, and the writing course.

*Becoming a Master Student* by David Ellis (Houghton Mifflin, 1994) was the required text for the study skills course which met twice a week. This text combines coverage of study skills (time management, memory techniques, reading skills, note-taking, test-taking, critical thinking and writing skills) with an orientation to college life including such topics as self-responsibility, diversity, relationships, health and money. Thus, in one required "package," these underprepared students received

an orientation to college, an introduction to general study skills, and academic assistance directly related to their courses.

Three groups of students of first-semester freshmen were identified for inclusion in this study. The first group was the participants in the CSDP. The second group for comparison was comprised of students who voluntarily enrolled in the same study skills course as the CSDP participants though the section met a different time. Both groups were taught by the same instructor using the Ellis textbook. The second group of students scheduled courses related to their majors and general education requirements, but they did not attend the tutoring session required in the CSDP program. The critical distinctions, therefore, between these first two groups were (1) voluntary vs. required enrollment in the study skills course, and (2) required attendance in academic support activities.

A third group consisted of students who served as a control group for this study based on their predicted grade point average being close to the predicted performance of the first two groups (at least 2.00 but less than 2.10 on a 4.00 scale) and their not being enrolled in any study skills classes or attending tutoring sessions.

Questionnaires were sent during the last week of the fall semester to the English and mathematics faculty who taught the classes (six math instructors and eight English instructors) in which the three groups of students were enrolled. These two subjects were selected so that comparisons would involve a common base of classes in which all three groups of students were enrolled. The questionnaire (Appendix A) asked course instructors to indicate the students' characteristics on ten items which reflected current behaviors considered to be related to better course performance. In addition, the faculty were asked to indicate how the students' behaviors had *changed* over the semester since it was thought that the students' characteristics might improve as they progressed through the developmental program. In order to avoid possible bias on the part of the instructors' responses, faculty were *not* informed of the group to which each of the students belonged.

Each student was assigned two scores based on faculty responses to the two scales in the questionnaire. The score for the academic behavior scale was the average of the scores for the ten items. For the change scale, the student's score was the total number of performance items indicated by the

instructor as having changed over the semester. The predicted grade point average and the first semester grade point average were collected for students. Using these figures, a difference score was also computed to indicate the discrepancy between actual and predicted achievement for the students in each group.

### Results

Table 1 reports the results of the study skills programs in terms of academic achievement. A one-way analysis of variance indicates that the three groups differed in terms of PGPA and how their actual performances compared to the predicted achievement. On the other hand, the three groups were not significantly different in terms of their actual GPA at the end of their first semester of college. The CSDP group which combined a study skills course with tutoring in the academic subjects had the largest accomplishment—starting with the lowest predicted grade point average (PGPA) and ending with the highest actual grade point average (GPA) for the first semester. The PGPA for the CSDP group was statistically lower ( $t=-7.03$ ,  $df=50$ ,  $p=.000$ ) than that of the course only group (voluntary participation and no tutoring). The difference between PGPA and GPA for the CSDP group amounted to the equivalent of an entire letter grade. Thus, CSDP group did significantly better ( $t=2.47$ ,  $df=50$ ,  $p=.017$ ) than the course only group in terms of the PGPA as compared to PGA. Students who attended the study skills course but did not receive supplemental tutoring did slightly more than half a letter grade better than what was predicted for them. For comparison purposes, the control group that received neither study skills help nor special tutoring did less than half a letter grade than was expected based on their background. However, the means for these two latter groups were not statistically different.

In looking at the entire sample of students, the actual grade point average achieved for the first semester was significantly related ( $r=.50$ ,  $p=.000$ ) to academic behaviors as reported by the faculty. This lends credibility to the questionnaire which was designed to tap faculty perceptions of behaviors related to academic achievement as exhibited by the students. As to behavioral changes over the semester, there was a significant correlation between the perceived change in the students' behavior over the semester and

grade point average ( $r = .36$ ,  $p = .001$ ). Finally, there is a significant correlation ( $r = .58$ ,  $p = .000$ ) for the entire sample between the two scales of reported behavior and change in behavior as reported by the faculty.

As shown in Table 2, students who participated in the CSDP were observed by their instructors as demonstrating significantly more behaviors related to academic success. The CSDP students exhibited more of the behaviors than the students who just enrolled in the study skills, and these students in turn demonstrated more of the characteristics than the control group.

There were no significant differences among the three groups in terms of faculty perceptions of behaviors changing over the semester.

One dilemma in evaluating the effectiveness of study skills programs is the motivation of students who agree to participate in such activities. It is difficult to evaluate programs when the initial predisposition of the participants can vary among the groups used for comparison. It is often assumed that the students who voluntarily enroll in a self-improvement experience differ in their motivation to succeed and thus cannot be fairly compared to another group with no such commitment to education. However, in this study, we compared a group of students who were *required* to participate and therefore could not have been presumed to have a higher level of motivation. In fact, the students who participated in the more comprehensive program (and were required to do so) did better than the second group who enrolled in the study skills course by their own choice.

#### Conclusions

Intervention techniques for at-risk college students can be successful in terms of changing students' academic behaviors. And, faculty observations appear to be a useful measure, in addition to traditional data such as grade point average and retention statistics, in assessing the effectiveness of developmental programs in postsecondary education. While participation in a study skills course appeared to affect student behavior, the data also indicate that academic tutoring combined with study skills courses is more effective in improving grades in courses than just enrollment in the study skills classes.

Table 1.  
Academic Achievement Among Student Groups

| Group         | Predicted<br>GPA | 1 <sup>st</sup> Sem<br>GPA | Difference<br>(GPA - PGPA) | N  |
|---------------|------------------|----------------------------|----------------------------|----|
| CSDP STUDENTS | 1.79             | 2.83                       | 1.04                       | 22 |
| COURSE ONLY   | 2.01             | 2.60                       | 0.59                       | 30 |
| CONTROL GROUP | 2.06             | 2.46                       | 0.40                       | 21 |
|               | p=.000           | n. s.                      | p=.006                     |    |

Table 2.  
Academic Behaviors Observed Among Student Groups

| <u>Group</u>  | <u>Mean</u> | <u>Std. Dev.</u> | <u>N</u> |
|---------------|-------------|------------------|----------|
| CSDP STUDENTS | 5.48        | 0.69             | 23       |
| COURSE ONLY   | 4.91        | 1.16             | 23       |
| CONTROL GROUP | 4.49        | 1.61             | 18       |

p = .03

#### References

Gebelt, J. L., Parilis, G. M., Kramer, D. A., & Wilson, P. (1996) Retention at a large university: combining skills with course content. *Journal of Developmental Education*, 20(1), 2-10.

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Stallworth-Clark, R., Scott, J. S., & Nist, S. (1996) The teaching process and postsecondary at-risk reading students: cognitive, metacognitive, affective, and instructional variables explaining academic performance. Eric Document ED 394419.

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**APPENDIX A**  
**FACULTY QUESTIONNAIRE**

DATE:

FROM:

TO:

The College Skills Development Program is seeking feedback on the effectiveness of its programs. I would appreciate your assessment of the students named on the attached sheets, some of whom have participated in the services offered. **PLEASE RETURN THE FORMS TO ME BY DECEMBER 9.**

STUDENT'S NAME \_\_\_\_\_

I. Circle the number that indicates your response to the following questions.

1. The student shows much motivation to succeed.

|                  |                      |   |   |                    |   |   |                                 |
|------------------|----------------------|---|---|--------------------|---|---|---------------------------------|
| 1                | 2                    | 3 | 4 | 5                  | 6 | 7 | Don't know OR<br>not applicable |
| No<br>motivation | Average<br>for class |   |   | Much<br>Motivation |   |   |                                 |

2. The student consistently attends class.

|                           |   |                         |   |                        |   |   |                                 |
|---------------------------|---|-------------------------|---|------------------------|---|---|---------------------------------|
| 1                         | 2 | 3                       | 4 | 5                      | 6 | 7 | Don't know OR<br>not applicable |
| Attendance<br>is sporadic |   | Missed a<br>few classes |   | Attends<br>all classes |   |   |                                 |

3. The student exhibits a positive attitude in class.

|                       |   |                      |   |                           |   |   |                                 |
|-----------------------|---|----------------------|---|---------------------------|---|---|---------------------------------|
| 1                     | 2 | 3                    | 4 | 5                         | 6 | 7 | Don't know OR<br>not applicable |
| Very poor<br>attitude |   | Average<br>for class |   | Very positive<br>attitude |   |   |                                 |

4. The student participates in class.

|                       |   |                           |   |                        |   |   |                                 |
|-----------------------|---|---------------------------|---|------------------------|---|---|---------------------------------|
| 1                     | 2 | 3                         | 4 | 5                      | 6 | 7 | Don't know OR<br>not applicable |
| Never<br>participates |   | Participates<br>sometimes |   | Always<br>participates |   |   |                                 |

5. Assignments are completed on time.

|                    |   |                        |   |                     |   |   |                                 |
|--------------------|---|------------------------|---|---------------------|---|---|---------------------------------|
| 1                  | 2 | 3                      | 4 | 5                   | 6 | 7 | Don't know OR<br>not applicable |
| Never<br>completed |   | Sometimes<br>completed |   | Always<br>completed |   |   |                                 |

6. The student's academic performance is at

|                    |   |         |   |                 |   |   |                                 |
|--------------------|---|---------|---|-----------------|---|---|---------------------------------|
| 1                  | 2 | 3       | 4 | 5               | 6 | 7 | Don't know OR<br>not applicable |
| Bottom of<br>class |   | Average |   | Top of<br>class |   |   |                                 |

7. The student contacts the instructor outside of class.

|                |   |                  |   |                      |   |   |                                 |
|----------------|---|------------------|---|----------------------|---|---|---------------------------------|
| 1              | 2 | 3                | 4 | 5                    | 6 | 7 | Don't know OR<br>not applicable |
| No<br>contacts |   | Some<br>contacts |   | A lot of<br>contacts |   |   |                                 |

8. The student demonstrates initiative.

|                  |   |                    |   |                        |   |   |                                 |
|------------------|---|--------------------|---|------------------------|---|---|---------------------------------|
| 1                | 2 | 3                  | 4 | 5                      | 6 | 7 | Don't know OR<br>not applicable |
| No<br>initiative |   | Some<br>initiative |   | A lot of<br>initiative |   |   |                                 |

9. The student is aware of his/her level of performance in the course.

|                 |   |                   |   |                       |   |   |                                 |
|-----------------|---|-------------------|---|-----------------------|---|---|---------------------------------|
| 1               | 2 | 3                 | 4 | 5                     | 6 | 7 | Don't know OR<br>not applicable |
| No<br>awareness |   | Some<br>awareness |   | A lot of<br>awareness |   |   |                                 |

10. The student has a serious and positive attitude toward the class.

|               |   |      |   |       |   |   |                                 |
|---------------|---|------|---|-------|---|---|---------------------------------|
| 1             | 2 | 3    | 4 | 5     | 6 | 7 | Don't know OR<br>not applicable |
| Not at<br>all |   | Some |   | A lot |   |   |                                 |

II. The following items relate to how the student's performance has changed over the semester. Please check each one that applies.

- Student's ability to assess his/her own performance has improved over the semester.**
- Student's ability to identify his/her weaknesses has improved over the semester.**
- Student's ability to ask appropriate questions has improved over the semester.**
- Student's ability to contribute insightfully to class discussions has improved over the semester.**
- Student's ability to solve problems independently has improved over the semester.**
- Student's ability to prepare for class and do assignments has improved over the semester.**
- Student's ability to integrate material from classroom, readings and other sources has improved over the semester.**

III. What other comments do you have about the student?



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